INLAND EARTH SCIENCES

CONSULTANTS IN THE ENVIRONMENTAL AND APPLIED EARTH SCIENCES

# PROJECT NARRATIVE

## FACILITY COMBINATION AND CONSOLIDATION
Sagebrush Ranch Calf Yard
4500 Glade Road
Mabton, Washington

October 10, 2025

FIGURES

## APPENDICES

| | |
|---|---|
| ac | acre |
| ac-ft | acre-feet |
| AFO | Animal Feeding Operation |
| AMSL | Above Mean Sea Level |
| ASTM | American Society for Testing and Materials |
| AU | animal units |
| bgs | below ground surface |
| °C | degrees Celsius |
| CAFO | Concentrated Animal Feeding Operation |
| cf | cubic feet |
| cfs | cubic feet per second |
| cm | centimeter |
| cm/s | centimeters per second |
| CPS | Conservation Practice Standard |
| cy | cubic yard |
| DAHP | Washington State Department of Archeology and Historic Preservation |
| DNR | Washington State Department of Natural Resources |
| DTW | depth to water |
| Ecology | Washington State Department of Ecology |
| eFOTG | electronic Field Office Technical Guide |
| EPA | United States Environmental Protection Agency |
| °F | degrees Fahrenheit |
| ft | feet |
| ft/d | feet per day |
| FSA | Farm Services Administration |
| gal | gallon |
| GCL | Geosynthetic Clay Liner |
| GP | General Permit |
| GVWR | Gross Vehicle Weight Rating |
| gpd | gallons per day |
| HDPE | High Density Polyethylene |
| HSP | Health and Safety Plan |
| IES | Inland Earth Sciences Corporation |
| in | inch |
| in/hr | inches per hour |
| kg | kilogram |

| | |
|---|---|
| L | liter |
| lb | pound |
| lbs/ac | pounds per acre |
| lbs/t | pounds per ton |
| IWMP | Irrigation Water Management Plan |
| MPPP | Manure Pollution Prevention Plan |
| m | meter |
| meq/L | milliequivalents per liter |
| mS/cm | millisiemens per centimeter |
| µg | microgram |
| µg/L | micrograms per liter |
| µm | micrometer |
| mg | milligram |
| mg/L | milligrams per liter |
| Mgal | million gallons |
| mgd | million gallons per day |
| mil | thousandths of an inch (e.g., "60 mil" is equal to 60 thousandths of an inch, or 0.060-inch) |
| mL | milliliter |
| mm | millimeter |
| MPa | Megapascal |
| mV | millivolt |
| NAIP | National Agriculture Imagery Program |
| NAVD88 | North American Vertical Datum 1988 |
| NOAA | National Oceanic and Atmospheric Administration |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| MSDS | Material Safety Data Sheets |
| OHWM | Ordinary High-Water Mark |
| pcf | pounds per cubic foot |
| PE | Polyethylene |
| PS | Polystyrene |
| PVC | Polyvinyl Chloride |
| psi | pounds per square inch |
| QCBID | Quincy Columbia Basin Irrigation District |
| RCW | Revised Code of Washington |
| RID | Roza Irrigation District |

| | |
|---|---|
| SCBID | South Columbia Basin Irrigation District |
| sf | square feet |
| SPCC | Spill Prevention, Control, and Countermeasures |
| SVID | Sunnyside Valley Irrigation District |
| SWD | State Waste Discharge |
| SWPPP | Stormwater Pollution Prevention Plan |
| USAF | United States Air Force |
| USBR | United States Bureau of Reclamation |
| USDA | United States Department of Agriculture |
| USGS | United States Geological Survey |
| WA | Washington State |
| WAC | Washington Administrative Code |
| WBZ | Water-bearing zone |
| WGS84 | World Geodetic System 1984 |
| WWR | Water Well Report |
| WDFW | Washington Department of Fish and Wildlife |
| WSDA | Washington State Department of Agriculture |
| WSDOT | Washington State Department of Transportation |
| WSP | Waste Storage Pond |
| YCC | Yakima County Code |
| yd | yard |
| yr | year |

# 1 INTRODUCTION

This project (the "Project") proposes to combine and consolidate the current adjacent calf raising operations located at the Sagebrush Ranch ("Sagebrush Ranch") and the Fryslan Ranch Calf Yard ("FRCY") into a single operational entity known as the **Sagebrush Ranch Calf Yard** ("Sagebrush"). The Project applicant is Sagebrush Ranch Enterprises, LLC [UBI 604 599 049], located at 650 Hornby Road, in Grandview, Washington. The Sagebrush Ranch operation is owned by Sagebrush Ranch Enterprises and the FRCY operation is owned by Fryslan Ranches Enterprises, LLC [UBI 603 410 967]. The real property occupied by the two operations is owned by Sagebrush Ranch Enterprises, FRH Enterprises, LLC [UBI 603 410 733], and Fryslan Ranches Enterprises.

The Sagebrush Ranch operation is a calf raising facility for "dairy-beef" calves (animals from dairy origin used for beef purposes) typically holding up to 17,000 "newborn" calves (approximately 3,400 animal units[1]) ranging in age from birth to three months, and 12,000 "elemental" calves (approximately 3,800 AU) ranging in age from three up to six months. At five to six months of age the "dairy-beef" calves are sold to beef feedlots for finishing. The Sagebrush Ranch operation was purchased by Sagebrush Ranch Enterprises, LLC from Van Boven Calf Ranch, Inc. in April 2020.

The FRCY operation is a dairy calf ranch operation raising dairy replacement cows to an age where they can be integrated into a milking herd. The FRCY operation typically holds approximately 3,000 newborn calves (approximately 400 AU), 3,000 elemental calves (approximately 620 AU), and up to 6,000 "weaner" calves (approximately 2,200 AU) ranging in age from five up to 12 months. At 12 months the calves are considered yearlings and are ready to be moved to a dairy cow operation for breading and herd integration. The FRCY began operation in April 2018.

The combined operation would allow for (1) consolidation of animals by age types regardless of intended use and (2) expansion of hutch and pen areas providing greater space for animals. Consolidation of age types allows for trained staff to focus on specific animal age groups, i.e. staff trained in calf care do not need to venture to multiple locations on the site to attend to animals. Greater space provides greater animal health, especially in the case of newborn calves. Calf hutch areas must be cleaned and soil allowed to air-dry following progression of calves to the next rearing stage. This rearing-cleaning-drying cycle prevents respiratory calf diseases such as pneumonia and particularly coccidioidomycosis ("Valley Fever"), a respiratory infection caused by fungal spores.

# 2 SITE LOCATION

The Project is located approximately 1½-miles south of Mabton, Washington in southeastern Yakima County (**Figure 1**). The Project's address is 1423 Glade Road, Mabton WA 98935; this is the address of the current Sagebrush Ranch facility, the address of the current Fryslan Ranch Calf Yard is 1405 Glade Road. The project is located on the east side of Glade Road, also known as Mabton-Bickleton Road, approximately 1.4 miles south of the southern Mabton City Limit (Maple Street). The Project is situated

[1] An animal unit (AU) is a standardized measure of an animal's forage consumption, often defined as a 1,000-pound cow consuming roughly 26 pounds of dry forage per day. The term is used in grazing management to determine stocking rates and carrying capacity, and in environmental regulations to quantify animal manure production for projects like manure storage areas and nutrient management plans.

within the southeast (SE¼) of Section 12 (Sec. 12) and the northeast quarter (NE¼) of Section 13 (Sec. 13), Township 8 North, Range 22 East, (T8N, R22E); and the south half (S½) of Section 7 (Sec. 7), the south half (S½) of the southwest quarter (SW¼) of Section 8 (Sec. 8), the northwest quarter (NW¼) of Section 17 (Sec. 17), and the north half (N½) of Section 18 (Sec. 18), Township 8 North, Range 23 East, (T8N, R23E); Willamette Meridian (W.M), Yakima County, Washington (**Figure 2**). The approximate geographic coordinates of the Project's centroid are 46.184738°N, 119.981194°W (WGS84).

The site is bounded to the north by the Sunnyside Valley Irrigation District (SVID) Mabton West Lateral canal, to the west by Glade Road, and to the east by Christenson Road (**Figure 3**). Directly south of the Project site is undeveloped land used in the past for sheep and cattle grazing activities. The Sagebrush Ranch operation is located on the western portion of the Project site and the FRCY operation is located on the eastern portion of the project site; the two operations are currently separated by a distance within the Project site of approximately one mile (**Figure 3**)

# 3 SITE SETTING

## 3.1 Legal Description and Zoning

The Project area is approximately 1,030 acres in size. Fourteen (14) land parcels, either in part or whole, compose the Project site (**Figure 4**). Parcel numbers and details are provided below:

| Yakima County Parcel No. | Parcel Size (ac.) | Property Owner | Notes |
|---|---|---|---|
| 220812-41005 | 40.11 | Sagebrush Ranch Enterprises | Fmr. Van Boven Calf Ranch |
| 230807-32001 | 33.35 | Sagebrush Ranch Enterprises | |
| 220812-43001 | 59.85 | Sagebrush Ranch Enterprises | Fmr. Van Boven Calf Ranch |
| 220813-11001 | 581.02 | FRH Enterprises | 1423 Glade Road, Mabton |
| 230807-31002 | 33.83 | Sagebrush Ranch Enterprises | |
| 230807-33002 | 117.09 | Sagebrush Ranch Enterprises | |
| 230818-22001 | 73.40 | FRH Enterprises | |
| 230818-21000 | 124.10 | FRH Enterprises | |
| 230818-12001 | 41.27 | FRH Enterprises | |
| 230818-11002 | 82.25 | FRH Enterprises | |
| 230808-33001 | 35.10 | FRH Enterprises | 1405 Glade Road, Mabton |
| 230808-34001 | 17.92 | Fryslan Ranches Enterprises | |
| 230808-34003 | 15.56 | Fryslan Ranches Enterprises | |
| 230817-21001 | 160.07 | FRH Enterprises | |

All parcels are zoned "(AG) Agriculture" as described per Yakima County Municipal Code (YCC) Chapter 19.11.010. The purpose of Agriculture (AG) zone is to preserve and maintain areas for the continued practice of agriculture by limiting the creation of small lots, permitting only those new uses that are compatible with agricultural activities, protection of agricultural lands of long-term commercial significance, and providing measures to notify and separate especially sensitive land uses from customary and innovative agricultural land management practices. A Concentrated Animal Feeding Operation (CAFO), defined in the YCC as an animal feeding operation (AFO) where more than 1,000

animal units are confined, is allowed within the AG zone (YCC Table 19.14-1) following a "Type 2" administrative review and approval by the Administrative Official as set forth in YCC 19.30.030.

## 3.2 Topography

The Project site is situated within the Benton Basin of the lower Yakima Valley. Topographic relief in the Project area trends from the Horse Heaven Hills in the south to towards the Yakima River valley in the north. Topographic relief across Project site trends from south/south-southeast to north/north-northwest (**Figure 2**), at gradients ranging from nearly level (zero to three percent) in the norther portion of the Project site to gently sloping (one to eight percent) in the southern portion of the Project site. The Project site elevation ranges from 755 feet AMSL in the north to 840 feet AMSL in the south. Site slopes typically range from approximately zero to four (4) percent with some slopes within depressional areas up to 10 percent.

## 3.3 Climate

The Columbia Basin is part of the Central Basin climatic area. Annual precipitation along the southern slopes of the Saddle Mountains, Frenchman Hills and east of Rattlesnake Mountains is seven inches. Summer precipitation is usually associated with thunderstorms. During July and August, it is not unusual for four to six weeks to pass without measurable rainfall. Snow can be expected after the first of December and to remain on the ground for periods varying from a few days to two months between mid-December and the last of February. Snow depths seldom exceed eight to 15 inches. The Central Basin is subject to "chinook" winds which produce a rapid rise in temperature.

The average January maximum temperature is near 30°F in the colder localities in the Columbia Basin and 40°F in the lower Yakima valley, and minimum temperatures are between 15 to 25°F. Minimum temperatures between -10 to 0°F are recorded almost every winter and temperatures from -30 to 15°F have been recorded. In July the average maximum temperature is in the lower 90's, and the minimum temperature is in the upper 50's. Maximum temperatures reach 100 to 105°F on a few afternoons each summer. The last freezing temperature in the Lower Yakima Valley typically occurs during the latter half of April.

The Cascade Range to the west causes a distinct rain shadow effect that results in the Lower Yakima Valley occupying some of the driest portions of Washington state. Yearly precipitation amounts average 7.42 inches with a median value of 6.92 inches. The maximum daily (24 hour-period) precipitation during this period averages 0.68 inches with a median value of 0.59 inches. The maximum 24-hour precipitation amount recorded during this period was 1.42 inches on September 16, 1986. NOAA defines the 25-year, 24-hour precipitation event for the facility area to be 1.6 inches and the 100-year, 24-hour precipitation event for the facility area to be 2.0 inches. The approximate annual evaporation for the facility area ranges from 35 to 45 inches per year, with evaporation during growing months (April to September) ranging from four to six inches per month. The dominant wind direction is from the west in spring, summer and fall and from the north in winter.

## 3.4 Geology and Soils

### *3.4.1 Geology*

Surficial geology (**Figure 5**) consists of Pliocene-epoch outburst flood deposits (**Qf**). These unconsolidated deposits consist of (1) lacustrine silts and fine sands that are rhythmically bedded and

fluvial coarse to fine sands with stringers of coarse sand and gravel and (2) fine gravel to boulder size gravels and sandy gravels with interbedded silt lenses. These were deposited during multiple catastrophic drainings of glacial Lake Missoula. Located north of the Project site are unconsolidated Holocene-epoch eolian (loess) deposits (Ql) of silt and fine sand that include clay, caliche, tephra, and paleosols.

These sediments overlie a sequence of three Miocene-epoch flood basalt flows known as the Columbia River Basalt Group (CRBG). The Valley is filled with a variety of sediments that thin out along the flanks of the basalt ridges. These sediments include: (1) Late Pleistocene to Holocene alluvial fan deposits shed from the rising ridges and large areas of loess; (2) thick deposits of alternating fine sand and silt deposited by the Late Pleistocene Missoula Floods; (3) Early Pleistocene loess; and (4) Mabton interbed sediments of the Ellensburg Formation. The Mabton interbed is coarser than overlying material, consisting of medium to coarse sand interbedded with thinner layers of silt and gravel. The overlying Pleistocene alluvial fan and loess material occurs as 15 to 30 feet of geographically heterogeneous clay- to gravel-sized material. The upper 10 to 30 feet are the Late Pleistocene Flood Silts typically consisting of a basal deposit of silty sand capped by clayey silt to very fine sand.

The CRBG flows (from youngest to oldest) consist of (1) the Saddle Mountains Basalt (the "SMB"), (2) the Wanapum Basalt, and (3) the Grande Rhonde Basalt. The CRBG flows are separated by two distinct sedimentary interbeds, both members of the Ellensburg Formation: (1) the Mabton Member (or "Mabton interbed"), separating the SMB and the Wanapum Basalt and (2) the Vantage Member (or "Vantage interbed"), separating the Wanapum Basalt and the Grande Rhonde Basalt. The structural setting of Benton Basin of the lower Yakima Valley is created by bounding ridges such as the Rattlesnake Mountains, Toppenish Ridge, and Horse Heaven Hills. The uppermost basalts of the SMB are typically exposed in these upland ridges. This SMB averages more than 500 feet thick. The underlying Wanapum Basalt averages 600 feet thick. The Mabton interbed is present at an average thickness of 70 feet.

The Saddle Mountain Basalt is the youngest and least extensive of the basalt units. The unit is located within the southeast and south-central part of the Yakima River Basin; the unit is typically hydraulically confined and most of the unit lies beneath the sedimentary basin fill deposits. The SMB is composed of at least 13 named flows and 5 interbed members. The SMB flow texture and composition differ greatly throughout its extent. The sedimentary interbeds contained within the SMB are common, up to 50 feet thick, and range in composition from clay to sand and gravel. The SMB also may contain some of the younger basalts present in the area.

The Wanapum Basalt is located within the northeast, central, south, and southeastern part of the Yakima River Basin (Jones and Vaccaro, 2008). The Wanapum Basalt is hydraulically confined; most of the Wanapum Basalt lies beneath the basin-fill deposits, the SMB, or the Mabton interbed. The Wanapum Basalt contains predominantly the basalt and interbed members associated with the Wanapum Basalt. The Wanapum Basalt is composed of at least six named flows and two interbed members. The Wanapum Basalt flows are generally medium-grained to moderately plagioclase-phyric, olivine bearing, and relatively high in iron and titanium oxides. The clay to sand-and-gravel sedimentary interbeds in the Wanapum Basalt are less common than those in the SMB and generally are only a few feet thick. But the Wanapum unit also may contain some of the younger basalt, particularly in areas along the margins of the unit extent and where the younger basalt abuts or overlies the Wanapum Basalt.

The Mabton interbed separates the SMB and the underlying Wanapum Basalt. The Mabton sedimentary interbed is located within the southeast and south-central part of the Yakima River Basin. The unit is hydraulically confined, with most of the unit present beneath the Saddle Mountains Basalt. The Mabton

interbed generally consists of clay, shale, claystone, clay with basalt, clay with sand, sand, sand-and-gravel, and sandstone. deposited by the ancestral Columbia River, Yakima River, and tributaries. The thickness of these sedimentary units averages less than 200 feet in the lower Benton Basin but up greater than 500 feet in the Toppenish Basin.

The CRBG within the western portion of the Columbia Basin province is structurally deformed on a regional scale. The Yakima Fold Belt, a structural-tectonic subprovince of the Columbia Basin, is the primary tectonic feature of the backarc of the northern Cascadia Subduction Zone, a broad deformation zone between the North American plate and the subducting Juan de Fuca plate to the west. The anticlines produced by the Yakima Fold Belt form west trending, prominent mountain-scale ridges protruding out of an otherwise flat landscape. The fold province formed no earlier than 15.6 Ma as they developed on a landscape that was reset to negligible relief following extrusion of the Grande Ronde Basalt. Anticline-associated faults and the resulting deformation is accommodated on two fault sets including west-northwest striking frontal thrust faults and shorter north to northeast striking faults.

### *3.4.2 Hydrogeology*

There are two main aquifer types within the Valley (1) a surficial unconfined to semi-confined alluvial aquifer and (2) an extensive basalt aquifer of great thickness underlying the sedimentary deposits. The basalt aquifer is believed to be semi-isolated from the surficial aquifer and stream systems. Groundwater flow within the surficial aquifer generally follows topography, with natural recharge occurring within the headlands and on the sides of the valley and discharge occurring to the Yakima River. Flow within the uppermost portions of the underlying basaltic aquifer also generally follows this pattern.

The surficial unconfined to semi-confined alluvial aquifer Lower Yakima Valley consists of sediments shed by the ridges at the margins of the study area and those deposited in the valley bottom. These sediments have an internal structure that strongly controls groundwater movement. As the water moves through these sediments, it tends to follow preferential flow paths composed of coarser sediments. Groundwater at shallower depths in the uppermost sediments tends to flow toward the Yakima River. Locally, the flow direction may be modified by geologic structures and by irrigation practices, drains, ditches, canals, and other hydrologic features. The water table is found at shallower depths as the Valley is approached from the basalt ridges. Near the Yakima River, it may be less than 10 feet to water, especially during the irrigation season.

Groundwater within the CRBG is found in fractures and interbeds formed of clinkers, permeable lava, paleolacustrine deposits, or paleosols and may occur at significant depths in the upland ridges, such as Horse Heaven Hills. Because the basalts extend to great depths, the deeper basaltic layers may convey waters across local flow divides to more regionally significant discharge locations such as the Columbia River. This pattern produces a major flow direction from northwest to southeast as water moves down the valley parallel to the course of the Yakima River.

### *3.4.3 Soils*

Soil types for the Project site are described using the Natural Resources Conservation Service (NRCS) *Web Soil Survey*, accessed at: https://websoilsurvey.sc.egov.usda.gov/. The information provided by the custom soils resource report (**Appendix A**) describes the Project site (**Figure 6**) as underlain by silts and fine sands with the dominant soil types being the Warden silt loam and the Esquatzel silt loam.

The Warden silt loam develops on terraces with the parent material consisting of loess over lacustrine deposits. Depth to a restrictive layer is greater than 60 inches. The natural drainage class is well drained.

Water movement in the most restrictive layer is moderately high. Available water capacity to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. There is no zone of water saturation within a depth of 72 inches.

The Esquatzel silt loam develops on flood plains with the parent material consisting of alluvium. Depth to a restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water capacity to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. There is no zone of water saturation within a depth of 72 inches.

## 3.5 Surface Water

The Sunnyside Valley Irrigation District (SVID) Mabton West Lateral (the "Lateral") forms a significant length of the northern Project boundary (**Figure 7**). The USFWS National Wetlands Inventory categorizes the Lateral as R4SBCx, a riverine system within a human-excavated channel that contains flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent. Surface water is present for extended periods, especially early in the growing season but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface. The Lateral ultimately discharges to the Yakima River.

Several Type 5[2] stream drainages are present to the south of the Project site (**Figure 7**). The drainages to the south of the western portion of the Project cease at or prior to the Project area boundary. The Type 5 drainage to the south of the eastern portion of the Project area is mapped as continuing through the Project area with a discharge point at the Mabton West Lateral. A hydrologic analysis of the Project area drainage system was completed as part of the Engineering Report for this Project.

## 3.6 Easements and Rights-of-Way

The following rights-of-way and easements are located within or adjacent to Project site (**Figure 8**):

- An easement for the SVID Mabton West Lateral is located along the majority of the Project's northern boundary.
- An easement for the Bonneville Power Administration (BPA) 230kV Spring Creek-Wine Country No. 1 and 500kV Wautoma-Rock Creek No. 1 transmission lines crosses the western portion of the Project site from northeast to southwest.

## 3.7 Cultural Resources

The Washington Department of Archeology and Historic Preservation (DAHP) Washington Information System for Architectural and Archaeological Records Data (WISSARD) digital repository was searched for the Project site and surrounding properties. Review of the Washington DAHP's Archeological Risk Assessment Model contained within the WISSARD repository (https://wisaard.dahp.wa.gov/Map) depicts

[2] Per YCC 16C.06.06, Type 5 streams are all ephemeral streams within Yakima County not classified as Type 1, 2, 3 or 4. Type 5 streams are not regulated under Yakima County Code Title 16C- Critical Areas

the majority of the Project site (**Figure 9**) has an Archeological Risk Level ranging from "Moderately Low" to "Moderate" with a small area of "High" corresponding to the Type V Stream drainage.

Three sites located on or adjacent to the Project site are listed as "eligible" in the Washington DAHP WISSARD database. These sites are:

**Property ID: 724210**
Common Name: Mabton West Lateral
Address: Mabton West Lateral

**Property ID: 724441**
Common Name: Spring Creek-Wine Country No. 1 Transmission Line
Address: Yakima County, WA

**Property ID: 672682**
Common Name: Wautoma-Rock Creek Transmission Line
Address: High School Road, Mabton, WA

### 3.8 Habitats and Species

The Washington State Department of Fish & Wildlife (WDFW) Priority Habitats and Species (PHS) map (https://geodataservices.wdfw.wa.gov/hp/phs/) was searched for the Project site and surrounding properties. The search returned no animals or plants listed as "threatened or endangered" species present on the Project site. The WDFW PHS map reports the presence of Ferruginous Hawk breading areas adjacent south of the Project area.

A significant portion of the Project site is mapped as Shrubsteppe habitat (**Figure 10**). Shrubsteppe (or "Shrub-steppe") is identified as a "Priority" habitat by WDFW. Shrubsteppe landscapes are dominated by rolling, grassy plains or "steppe," with an overstory of sagebrush and other woody shrubs. Microscopic organisms form a cryptobiotic crust that conserves moisture and aids in preventing erosion. Within a large shrubsteppe habitat, features such as streams, wetlands, rocky talus slopes, and canyons can support a variety of plants and animals unique to the shrubsteppe ecosystem. Currently, the shrubsteppe habitat mapped on the Project site is identified as ""Yakima County Presumptive Shrubsteppe habitat." The identification notes state "*General location of Shrubsteppe. Confirm or refute with site-scale info. WDFW recommends using site-scale info to inform site-scale and use decisions. Expect that on-the-ground conditions (e.g., boundaries) will vary from the map.*"

The southern portion of the Project area is mapped as "Upland Wildlife Habitat Conservation Area" (**Figure 11**), a Critical Area per YCC 16C.11.040. Upland Wildlife Habitat Conservation Areas are those areas within which state or federally designated endangered, threatened, or sensitive species have a primary association and are designated as critical areas. Projects proposed within an upland wildlife habitat conservation area with which state or federally endangered, threatened, or sensitive species or a species of local importance has a primary association may be required to submit Critical Areas Identification Form and site plan as per 16C.03.02(1).

## 4 PROPOSED PROJECT

The Project proposes combining and consolidating the existing 297 ac Sagebrush Ranch and 166 ac FRCY facilities (**Figure 12**) into a single 1,030 ac operational area. Hutches and solid storage will be

consolidated from multiple locations into single locations. As part of the consolidation, approximately 12 ac of hutch area and approximately 127 ac of animal pens would be constructed within the Project area in addition to the hutch and pen areas currently existing at the Project site. The consolidation will also enhance and augment operational infrastructure such as stormwater and runoff conveyance, dry manure and compost storage, and waste storage pond construction.

## 4.1 Demolition

No structure demolition is proposed as part of the Project.

## 4.2 Ground Preparation

Approximately 127 acres of vacant ground will be grubbed off, graded, and mechanically compacted as part of the Project. Excavation will be performed as necessary to accommodate underground piping, utilities, footing excavation, collection sumps, waste storage ponds, and portions of site grading. A maximum earth movement of approximately 430,000 cy is anticipated. Fill material is not required for mass grading as the designed cuts and fills balance material on the Project site. However, minor amounts of structural fill (less than 100 cy) for building pads may be required. Fill sources are not determined at this time, however all imported fill materials (common borrow, 5/8" gravel, 1¼" gravel, 2" minus) will come from a county-approved material source.

## 4.3 Construction

Following demolition and ground preparation, the following structures will be constructed:

- A 12 ac soil pad for hutches
- Fifteen (15) open-lot corrals ("pens") totaling 127 acres
- Twelve (12) concrete lanes for each corral's feed alley
- A 26,000-sf milk mixing shop located in the west operations area
- A 38,000-sf commodity barn located in the west operations area
- Four (4) additional stormwater/manure liquid WSPs: 768,000 gal, 10.4 Mgal, 5 Mgal, and 3.5 Mgal.
- A 59 ac manure solids and compost storage area consisting of a graded and compacted soil pad

## 4.4 Utilities

Electric power is supplied to the Project site by Benton Rural Electric Association (REA). Solid waste services are provided by Yakima Waste Systems.

### *4.4.1 Water*

Water will be withdrawn from wells for: (1) domestic use; (2) "industrial" uses including wash water for equipment sanitization, (3) non-transient, non-community (NTNC) public water system (PWS) uses; and (4) stockwater purposes. All uses are exempt from requiring a groundwater permit for the supplying well

per RCW 90.44.050. Domestic, industrial, and PWS uses cannot exceed 5,000 gallons per day; stockwater withdrawls are unlimited. Using accepted quantities of expected water consumption for this herd mixture, the average daily water consumption over a year is calculated as approximately 119,500 gallons per day or 0.4 acre-feet per day.

Information for the water wells on the Project was obtained by searching Ecology's *Washington State Well Report Viewer* online database (https://appswr.ecology.wa.gov/wellconstruction/map/WCLSWebMap/default.aspx). This database provides access to the Water Well Reports (WWRs) as submitted to Ecology by licensed well drillers following installation of a subsurface boring or well. The database search returned WWRs for 11 wells located within one mile of the Facility (**Appendix B**). The well locations are depicted on **Figure 13** and pertinent information is summarized below:

| Well Tag | Well Owner | Well Address | Completion Date | Well Depth (ft bgs) |
|---|---|---|---|---|
| ACE511 | Alberto Molima | End Of Christenson Rd, Mabton | 9/3/1996 | 122 |
| ACL582 | Cindy Crawford | End Of Christenson Rd South Side Canal, Mabton | 4/1/1997 | 157 |
| AHK705 | Steve Vanboven | 2210 Waneeta Rd, Grandview | 9/15/2002 | 380 |
| ALC037 | Van Boven Holding Co | Mabton | 2/28/2010 | 157 |
| ALC038 | Van Boven Holding Co | Mabton | 3/1/2010 | 117 |
| ALF991 | Steve Van Bovan | | 3/14/2006 | 685 |
| BIF429 | Fransisca Vander Muelen | 610 Christinsen Rd, Grandview | 6/4/2015 | 765 |
| BIF430 | FRH Enterprises | Glade Rd, Mabton | 6/18/2015 | 370 |
| BLD489 | Sagebrush Ranches | 1423 Glade Rd. | 7/15/2020 | 290 |
| BLD490 | Sagebrush Ranches | Mabton Bickleton Hwy Mabton 98935 | 8/8/2020 | 315 |
| BLD492 | Sagebrush Ranches | Mabton Bickleton Hwy | 8/21/2020 | 315 |

Well ALF 991, located in Tax Parcel 230807-33001, operates under Washington Water Right Certificate G4-27178G, issued in 1980, with allowed annual quantity (Qa) of 190 acre-feet/year and an instantaneous discharge rate (Qi) of 255 gallons per minute. Water Right information for this well was obtained from Ecology's *Water Resources Web Map* database (https://appswr.ecology.wa.gov/WaterRightsMap) and is included in **Appendix C**.

### *4.4.2 Sewage and Septic*

Two systems are present at the Project, one for the West operation and one for the East operation. Only human-generated domestic sewage (blackwater) is discharged to the Project system septic tanks; "Industrial" wastes and greywaters from feeding operations are discharged to the waste storage ponds. The size of both systems is identified as 1,500 gallons.

Two single-family residences are present on the Project's East (FRCY) portion. They are served by individual residential septic systems that pre-dated the construction of FRCY. The residential systems receive both blackwater and greywater. Their size is unverified.

## 4.5 Traffic

Glade (Mabton-Bickelton) Road provides established access to the Project. Glade Road is classified as a "Rural Major Collector" (Functional Class Route Identifier K390) by the Washington State Department of Transportation, intending to serve as a significant link to arterials and important traffic generators, with a greater emphasis on moving traffic over longer distances and at higher speeds. Northbound travel on

Glade Road from the Project leads to the City of Mabton where Glade Road becomes Main Street inside the Mabton City Limits; Main Street retains the WSDOT Functional Class of Rural Major Collector. Glade/Mabton-Bickelton/Main intersects with Washington State Highway 22 approximately 1.8 miles north of the Glade Road Project entrance.

The proposed facility will have 30 to 35 workers per shift for two shifts per day, seven days a week. This predicts up to 140 total trips per day to and from the facility by workers in passenger vehicles; however, many workers carpool, likely cutting the number of trips by 25 percent. Peek trip times are anticipated to be 5:30 to 6:30 a.m. and 5:30 to 6:30 p.m.

The facility will likely receive between five and eight deliveries of feed commodities and other bulk supplies per day for a total of up to 15 trips by heavy truck (greater than 26,000 lbs GVWR). Trips are distributed throughout the day. Other service vehicles (maintenance, contracted animal health worked, etc.) are expected to access the facility. These trips are mainly during daylight hours.

The information for these traffic estimates is based on facility operator knowledge and experience. These trip calculations are TOTAL trips for the proposed facility; the actual impact by the facility would be in addition to the trips already related to the current facility's operations.

# 5 OTHER PROJECT REQUIREMENTS

## 5.1 CAFO General Discharge Permit

The Project will obtain a Washington State Department of Ecology (Ecology) Concentrated Animal Feeding Operation (CAFO) National Pollutant Discharge Elimination System (NPDES) And State Waste Discharge (SWD) General Permit (the "Permit") for the facility. The Project will prepare and submit to Ecology a Manure Pollution Prevention Plan (MPPP) as required by Special Condition S4.A of the Permit. The MPPP provides a framework of actions, practices, and guidance to limit the potential for discharge of manure, litter, process wastewater, organic by-products, and other possible sources of pollution from a CAFO to waters of the United States and Washington State for purposes of complying with federal and state water quality standards. The facilities, practices, and procedures described in the MPPP must be sufficient to address Permit Special Conditions S4.B through S4.Q, S.5, S.6 and S.7.

## 5.2 Manure Management Practices

Properly utilized agriculture nutrients are a natural resource that provide economic and environmental value. Efficient use of animal manure in crop production can result in substantial savings in energy consumption. The primary benefit of applying manure to agricultural fields is fertilization, as 16 essential plant nutrients are present. Manure also adds organic matter to the soil, which can improve soil structure, infiltration, and general tilth, leading to reduced soil erosion and increased soil moisture holding capacity. The decomposition of manure releases nitrogen and phosphorous slowly by the action of microorganisms. This conserves these elements and makes them available throughout the year as they are needed for plant growth.

Agricultural field application rates are guided by WA NRCS CPS 590 *Nutrient Management*. The use of an agronomic rate to guide nutrient applications is the primary management tool for achieving the goal of limiting the transport potential for manure, litter, process wastewater, and other organic by-products from field applications to ground and surface waters. The agronomic rate is crop specific and is calculated for

each crop produced. To calculate an agronomic rate, dairy nutrient sources are evaluated (through sampling and analysis procedures described in previous portions of this plan) for total nitrogen, which principally includes ammonia nitrogen, nitrate nitrogen, and organic nitrogen. Other potential sources of nutrients, such as organic matter, irrigation water, crop residue, and past manure applications, are established through sampling and calculation and accounted for in the determination of an agronomic rate. Following application, only a portion of the nitrogen measured in the dairy nutrient sources is available to the crop during the growing season. Available nitrogen is calculated using parameters of the nutrient source as guided by Oregon State University Extension Service Publication EM 8954-E *Estimating Plant-available Nitrogen from Manure*.

Residual soil nitrogen is measured by soil sampling and is a critical component of an agronomic rate. Due to variation in crop physiology and rooting depth, not all the measured residual nitrogen within the soil will be available to the growing crop over the season. Therefore, a small portion of the nitrogen is typically "positionally unavailable" or "not accessible." The fate of this nitrogen can be expected to be one or more of the following: available to the crop through capillary action caused by high evapotranspiration; held within the profile for possible later use from current or future crops; denitrified if wet conditions develop; or moved downward farther into the profile.

As the crop develops, in-season adjustments are sometimes made using tissue samples (petioles) and/or soil samples. These samples can be taken to assess if current nutrient availability will be adequate to meet crop need to finish out the crop. If it is determined that additional nitrogen will be required to meet crop demand, the initial agronomic rate is adjusted. An agronomic rate should not be considered either an absolute maximum or minimum, as in-season dynamics can change. However, if applications are made outside of these parameters, documentation of the reasons for the change in rate will be recorded.

As part of the agronomic rate process, the most recent manure, litter, process wastewater, and other organic by-product nutrient analyses are used to determine rates. Application of manure, litter, process wastewater, and other organic by-products are timed to be as close as possible to before and during the highest nutrient usage periods of crop uptake so that crop production will not be hindered. Manure truck drivers, field inspectors, and management are trained for proper manure handling and application at employee orientation, and annually thereafter.

## 5.3 Odor Control Methods

The production, handling, hauling, and composting of manure can contribute to potential odor. Odors are generally associated with releases of ammonia nitrogen, sulfur, and/or particulate emissions. To address air quality concerns caused by odor, the Project will utilize following methods to minimize the potential negative impact of these emissions on the environment and human health.

- Conduct periodic pen maintenance to reduce manure buildup, ponding, or potential runoff.
- Water application via sprinklers.
- Conduct dust mitigation efforts under consideration of anticipated weather conditions (for example before a high wind event).
- Avoid compost activities when conditions exist that may result in the movement of particulate matter.

- Use vegetative barriers or other form of windbreak.
- Others as needed.

The Project will prepare and comply with Yakima Regional Clean Air Agency approved Construction Dust Control Plan and Cattle Feeding Operation Dust Control Plan. Use of Best Management Practices (BMPs) to control fugitive emissions and odor such as WA NRCS CPS 375 *Dust Management for Pen Surfaces* and University of Idaho Extension Publication CIS 1148 *Odor Control Practices for Northwest Dairies*.

## 5.4 Vector Control Methods

Management and sanitation are key to preventing or eliminating any vector problems. Rodenticides and pesticides are the final tools in controlling vectors. The Project will utilize following methods for vector control:

Rodent Control

- Utilize and properly maintain in-pen feeders.
- Follow good sanitation practices for manure management.
- Separate storage area from livestock rearing areas because storage areas provide hiding places for rodents.
- Maintain good sanitation around the exterior of production facility.
- Store feed and feed supplements properly.
- Conduct biweekly rodent monitoring programs. This should include all feed production buildings, commodity storage, and office buildings.
- Remove and dispose of all dead animals and other biological materials immediately and appropriately.

Fly Control

- Remove manure from pens as frequently as possible.
- Turn stacked solid manure (compost) frequently to speed drying.
- Eliminate silage-seepage areas and wet organic matter accumulations.
- Clear any wet feed remaining near the ends of feed alleys.
- Provide proper drainage and eliminate low spots in pens
- Cut weeds and control excessive plant growth around facilities where flies rest and breed

## 5.5 Silage Management Methods

The Project will utilize following methods to manage silage:

- Control water run-off around the silage pile and ensure that surface water is directed away from the pile.
- Deface the silage pile in even layers.
- Only remove silage for daily use.
- Maintain the correct feedout rate to minimize aerobic spoilage.
- Avoid feeding spoiled silage.
- Dedicate loader buckets to forages and feed

## 5.6 Track-Out Control Methods

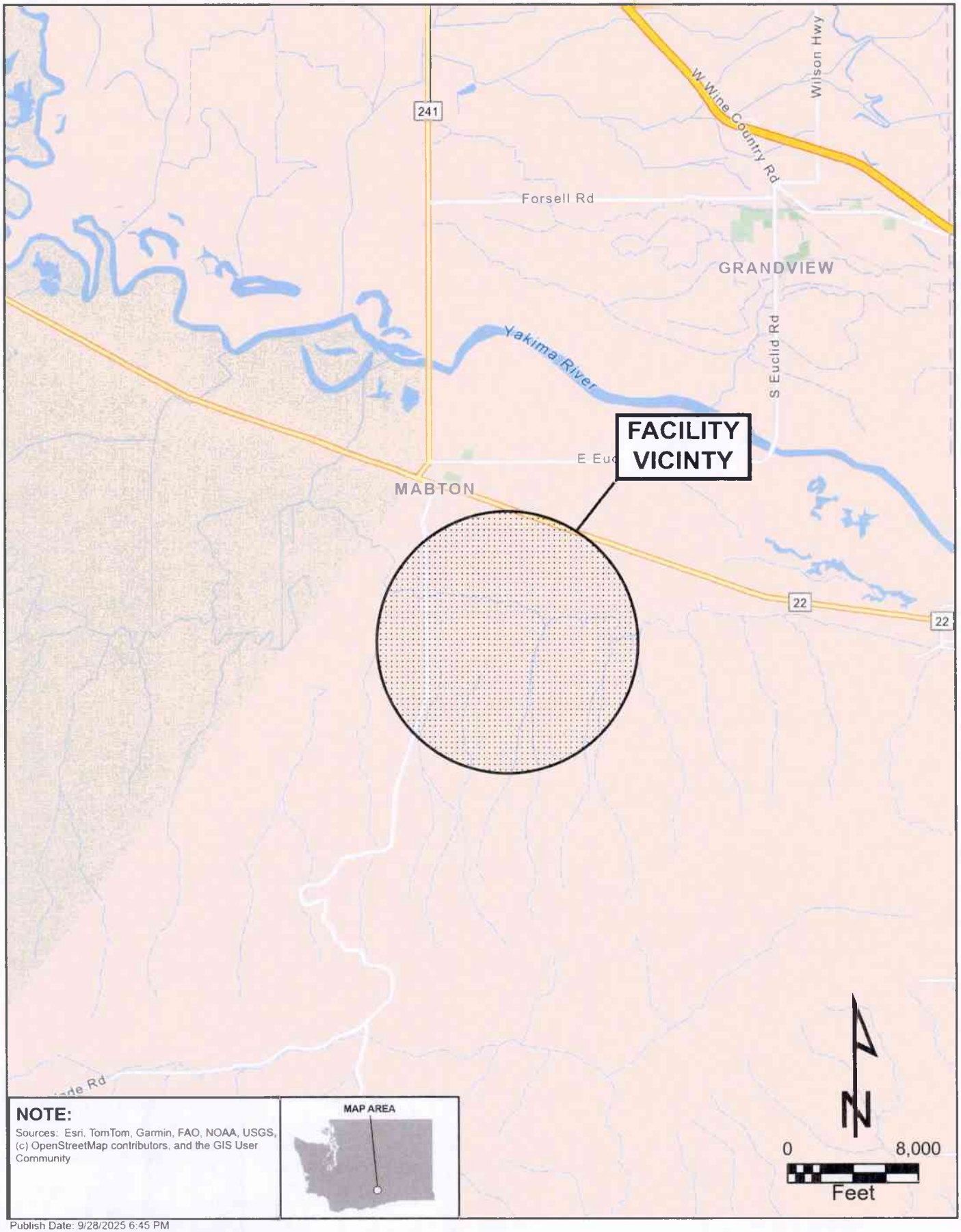
The Project will utilize following methods to control track-out from the site:

- Track-out control mats or structures: Install durable, reusable mats or gravel pads designed to remove mud and debris from vehicle tires as they exit the site.
- Barriers: Use physical obstructions like gates, fencing, posts, signs, or even landscaping to restrict or control access to unpaved areas.
- Designated access points: Establish and clearly mark controlled points of entry and exit for vehicles and personnel.

## 5.7 Waste Storage Pond Lining

Manure liquids will be stored in Waste Storage Ponds (WSPs) constructed to meet the Washington CAFO Permit specified in Section S4.C.1. - *Liquid Waste Storage Structures*, specifically that "*Liquid waste storage structures must be designed, constructed, and maintained to have a maximum water specific discharge of* $1 \times 10^{-6} cm^3/cm^2/s$ *without consideration for manure sealing.*"

The design, construction, and operation and maintenance guidance for WSPs is provided in WA NRCS CPS 313 *Waste Storage Facility*. Current construction criteria and operation and maintenance guidance is provided in WA NRCS CPS 520 *Pond Sealing or Lining, Compacted Soil Treatment*, CPS 521 *Pond Sealing or Lining, Geomembrane or Geosynthetic Clay Liner*, and CPS 522 *Pond Sealing or Lining, Concrete*. Existing WSPs at the Project are either currently designed and constructed according to CPS 521 or will be retrofitted in accordance with CPS 521. New WSPs at the Project will be designed and constructed in accordance with WA NRCS CPS 313 and CPS 521.

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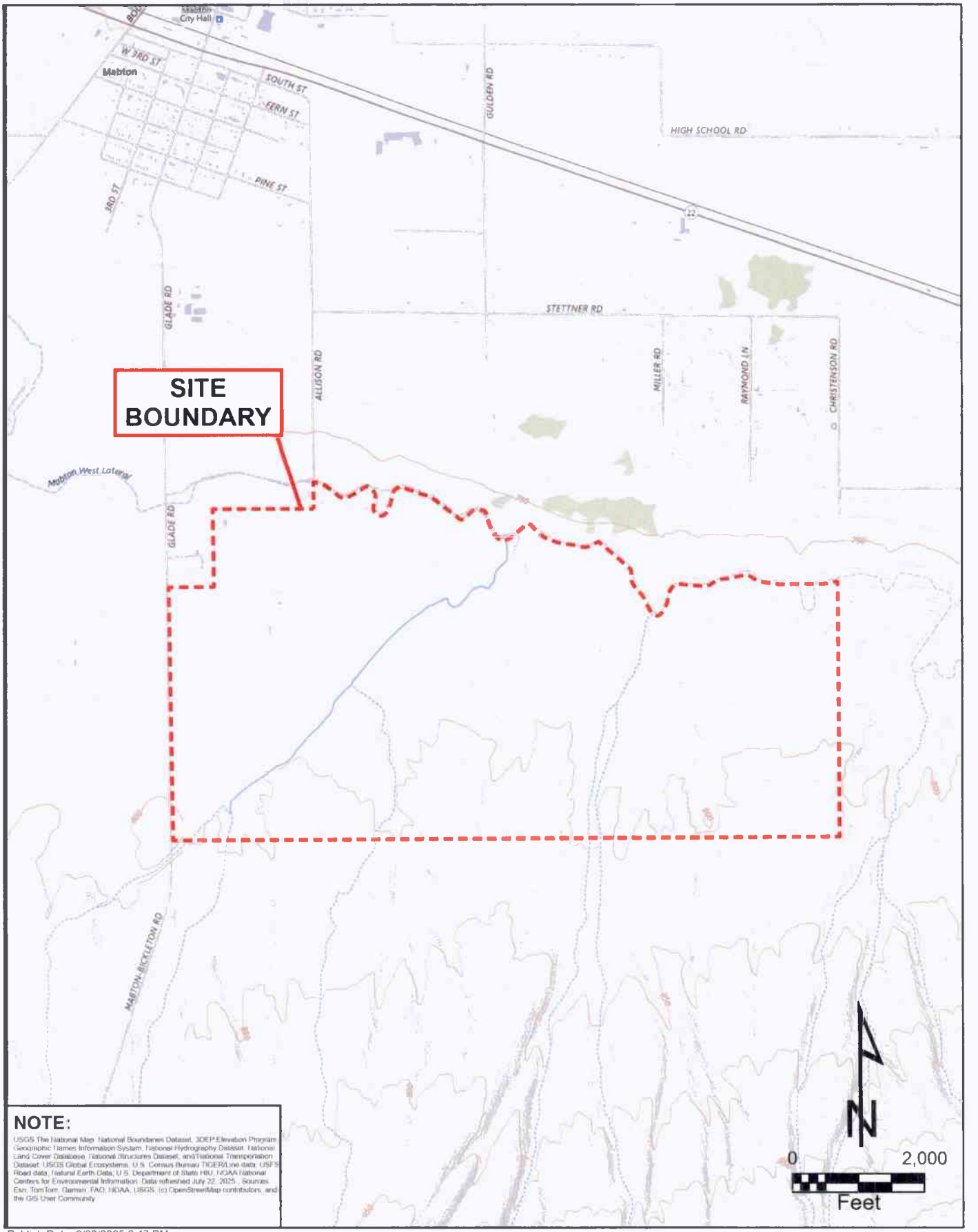
INLAND EARTH SCIENCES

**LOCATION MAP**
Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 1**




**NOTE:**

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State; FAO; NOAA; National Centers for Environmental Information. Data refreshed July 22, 2025. Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

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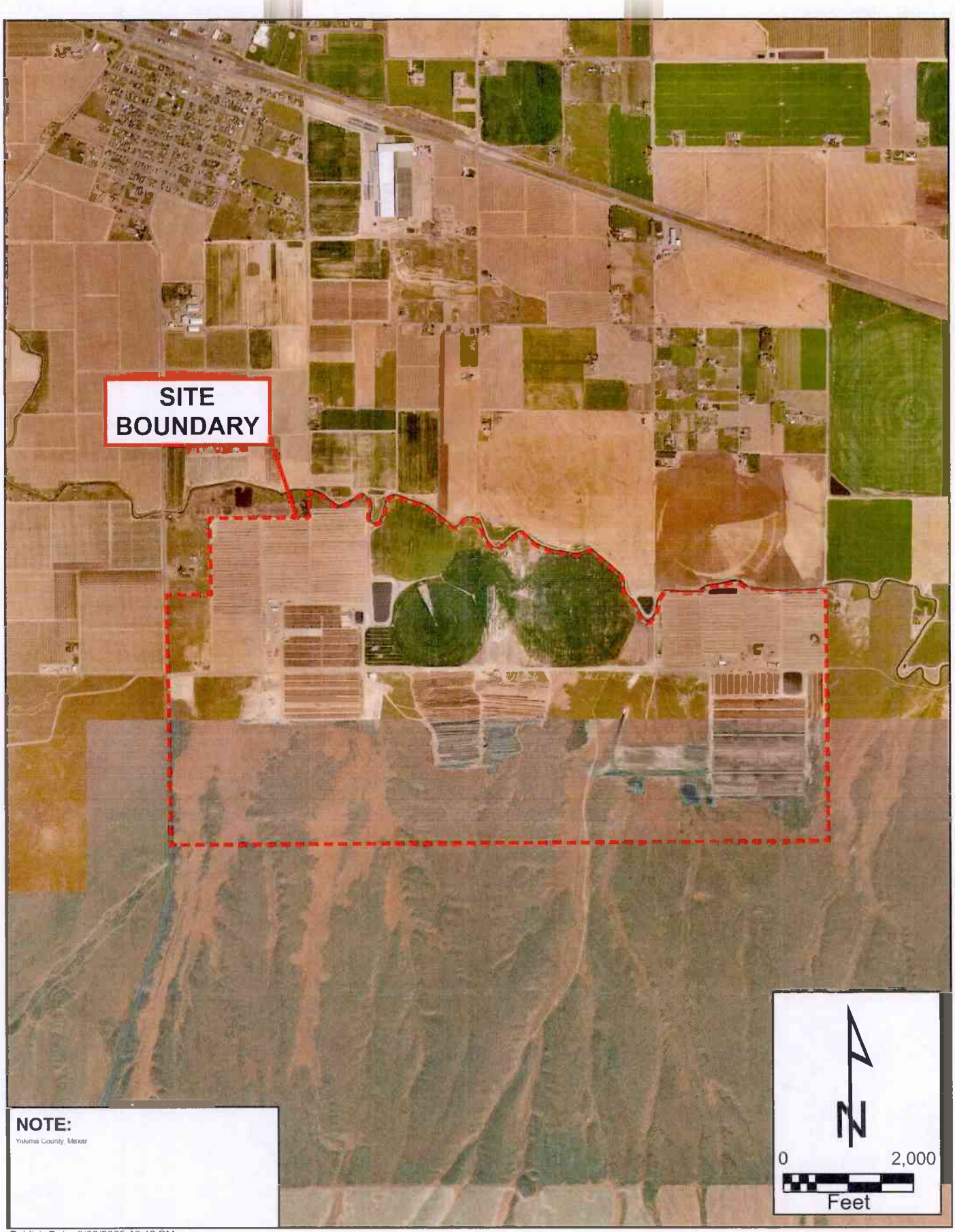
**VICINITY MAP**

Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 2**

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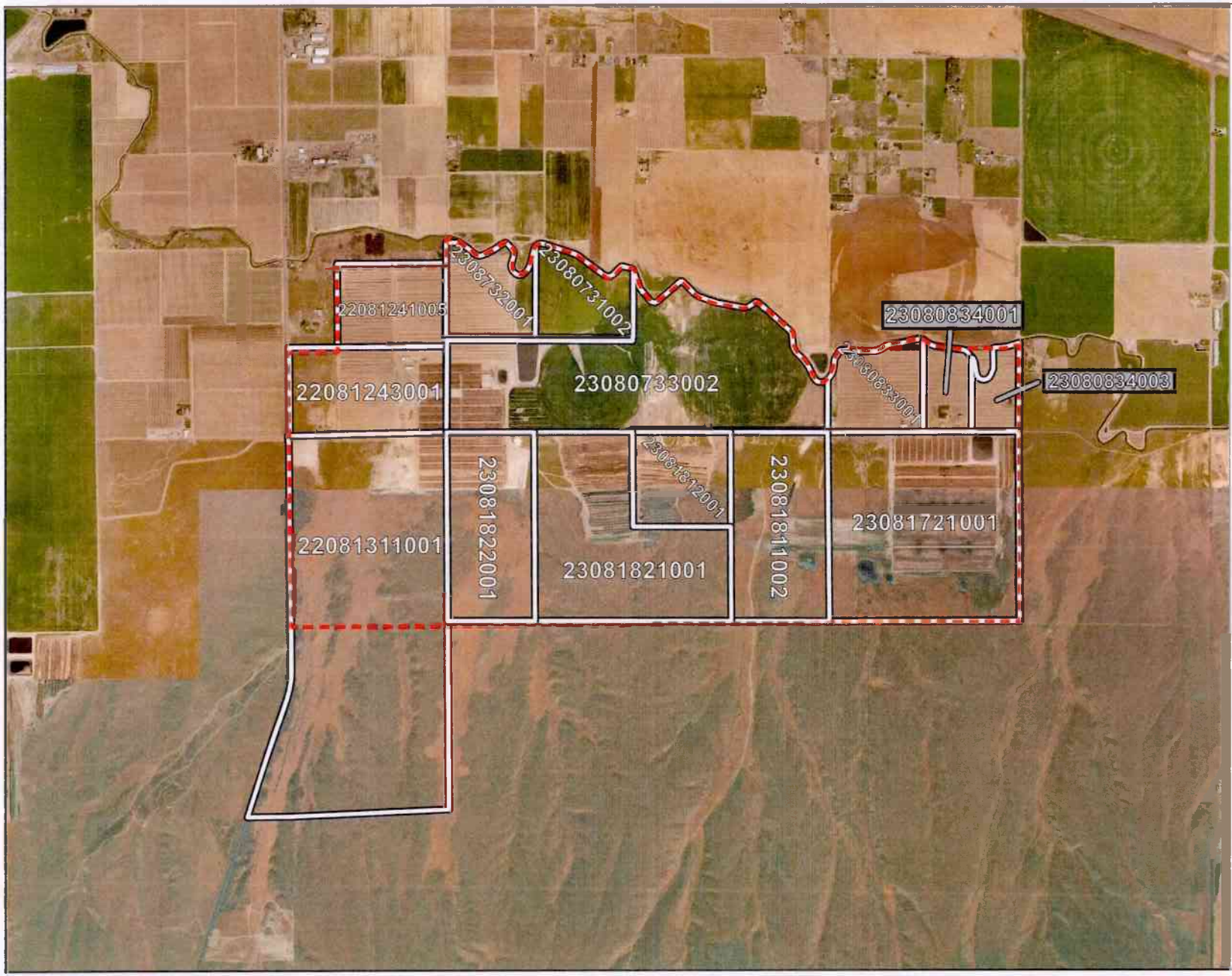
INLAND EARTH SCIENCES

**VICINITY AERIAL VIEW**
Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 3**




**LEGEND**

SITE BOUNDARY

**PARCELS**

1234567890 - PARCEL IDENTIFICATION NUMBER

PARCEL BOUNDARY

**NOTE:**

Yakima County, Maxar

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Feet

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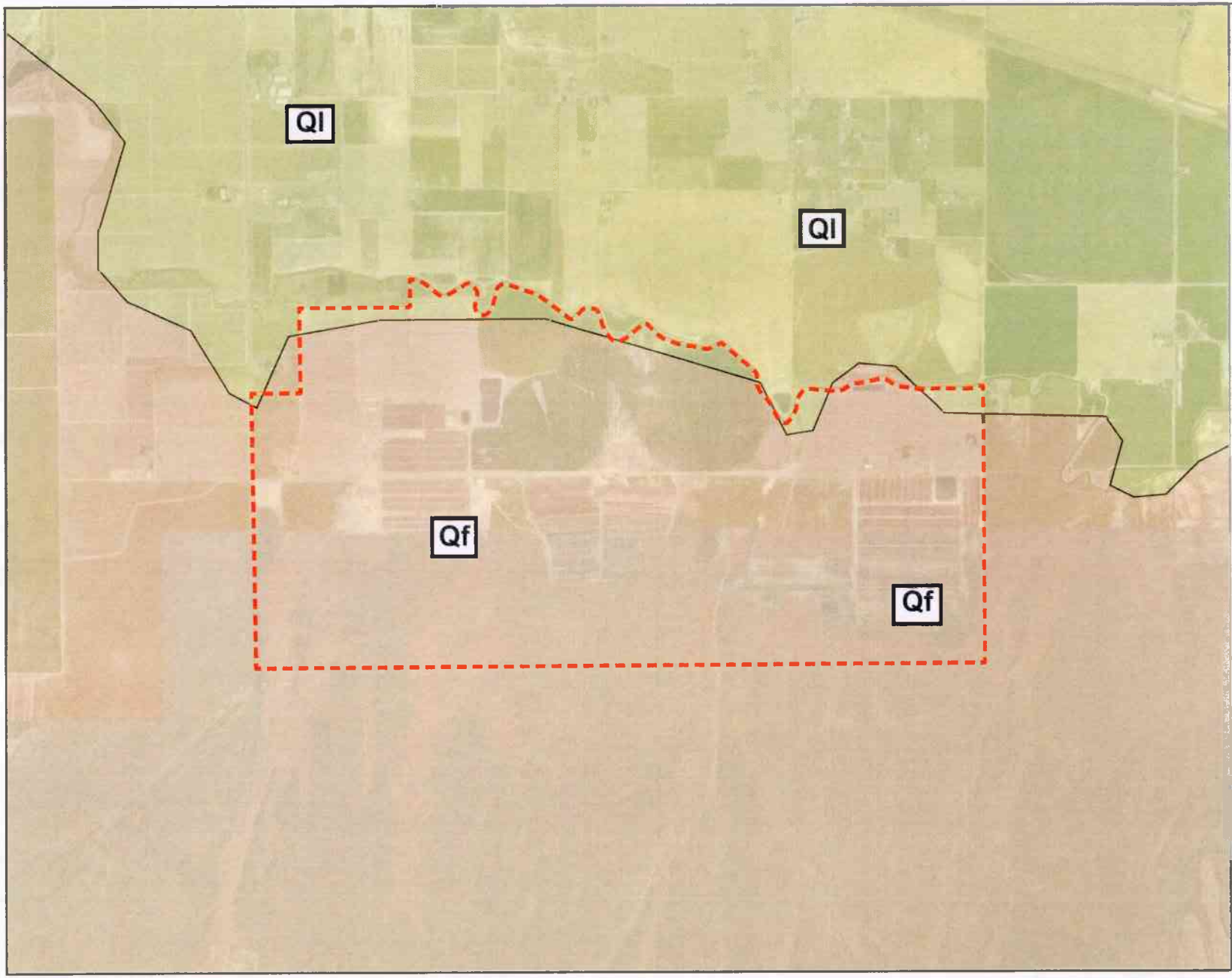
INLAND EARTH SCIENCES

**PARCEL MAP**

Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 4**




**LEGEND**

SITE BOUNDARY

**SURFICIAL GEOLOGY**

IDENTIFICATION UNIT

**Ql** - QUATERNARY LOESS

**Qf** - PLEISTOCENE OUTBURST-FLOOD DEPOSITS

**NOTE:**

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database.

Yakima County, Maxar

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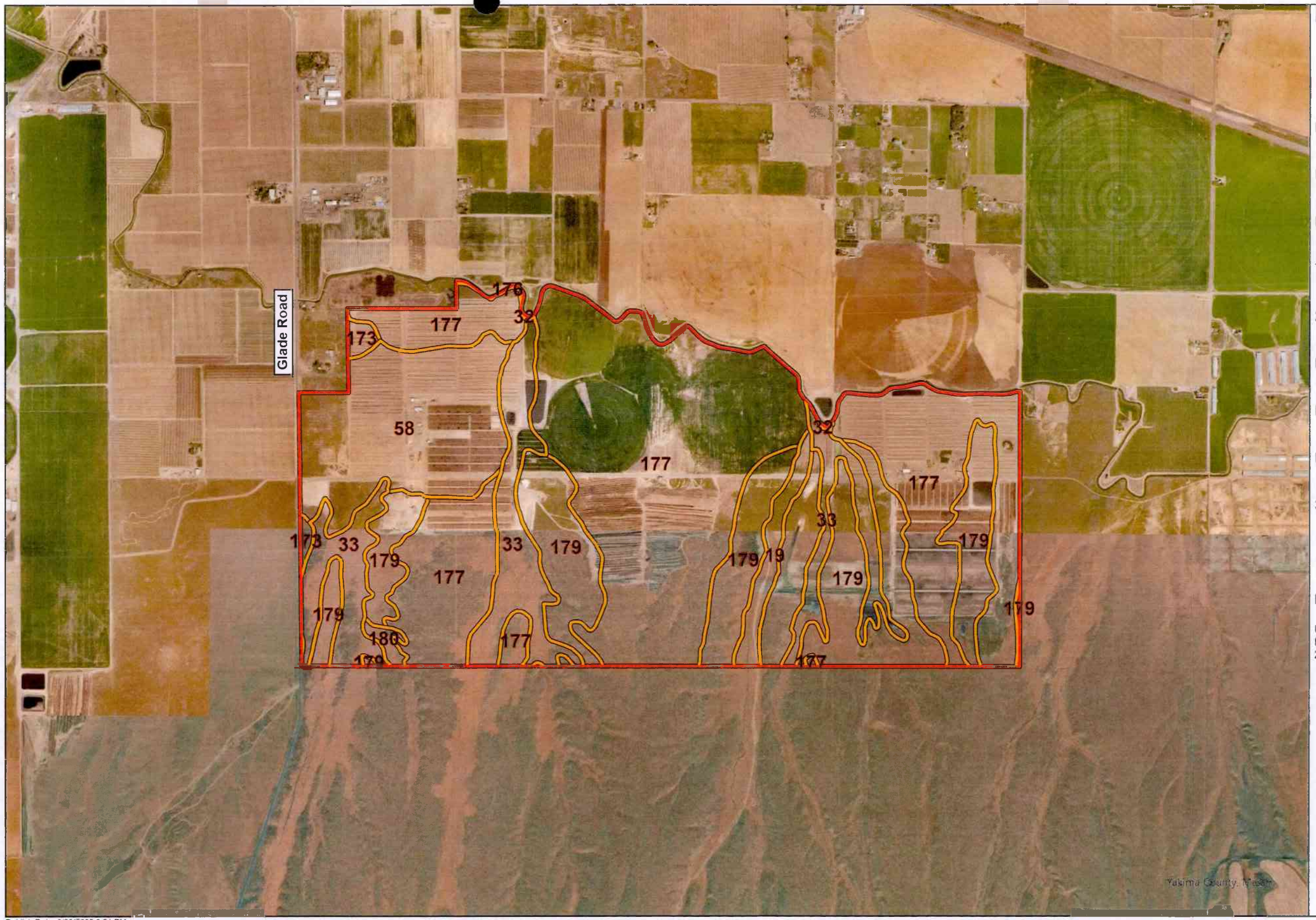
**VICINITY SURFICIAL GEOLOGY**

Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 5**




**LEGEND:**

SITE BOUNDARY

**123 SOILS MAP UNIT**

**19** - CLEMAN VERY FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES

**32** - ESQUATZEL SILT LOAM, 0 TO 2 PERCENT SLOPES

**33** - ESQUATZEL SILT LOAM, 2 TO 5 PERCENT SLOPES

**58** - HEZEL LOAMY FINE SAND, 2 TO 15 PERCENT SLOPES

**173** - WARDEN FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES

**176** - WARDEN SILT LOAM, 0 TO 2 PERCENT SLOPES

**177** - WARDEN SILT LOAM, 2 TO 5 PERCENT SLOPES

**179** - WARDEN SILT LOAM, 8 TO 15 PERCENT SLOPES

**180** - WARDEN SILT LOAM, 15 TO 30 PERCENT SLOPES

**NOTE:**

U.S. Geological Survey, 2019, USGS TNM Hydrography (NHD), accessed September 16, 2025

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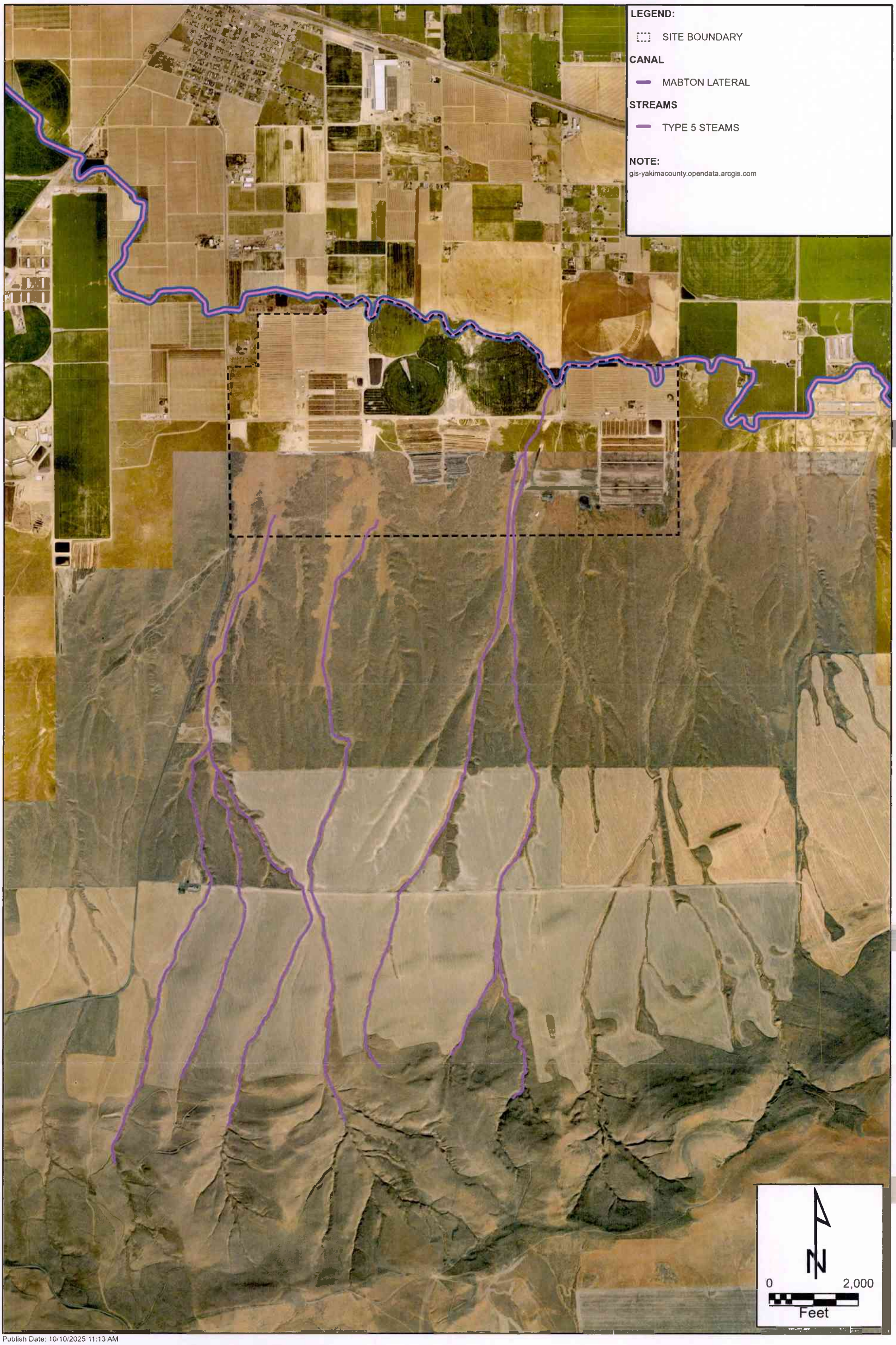
INLAND EARTH SCIENCES

**SOILS**
Conditional Use Permit Application
T. Freeman Dairy Expansion
6201 N Wahluke Road, Othello, WA

**FIGURE 6**

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INLAND EARTH SCIENCES

**HYDRAULIC FEATURES**
Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 7**


**LEGEND**

SITE BOUNDARY

**EASEMENTS**

BPA TRANSMISSION EASEMENT

SVID MABTON LATERAL EASEMENT

**NOTE:**

Yakima County, Maxar

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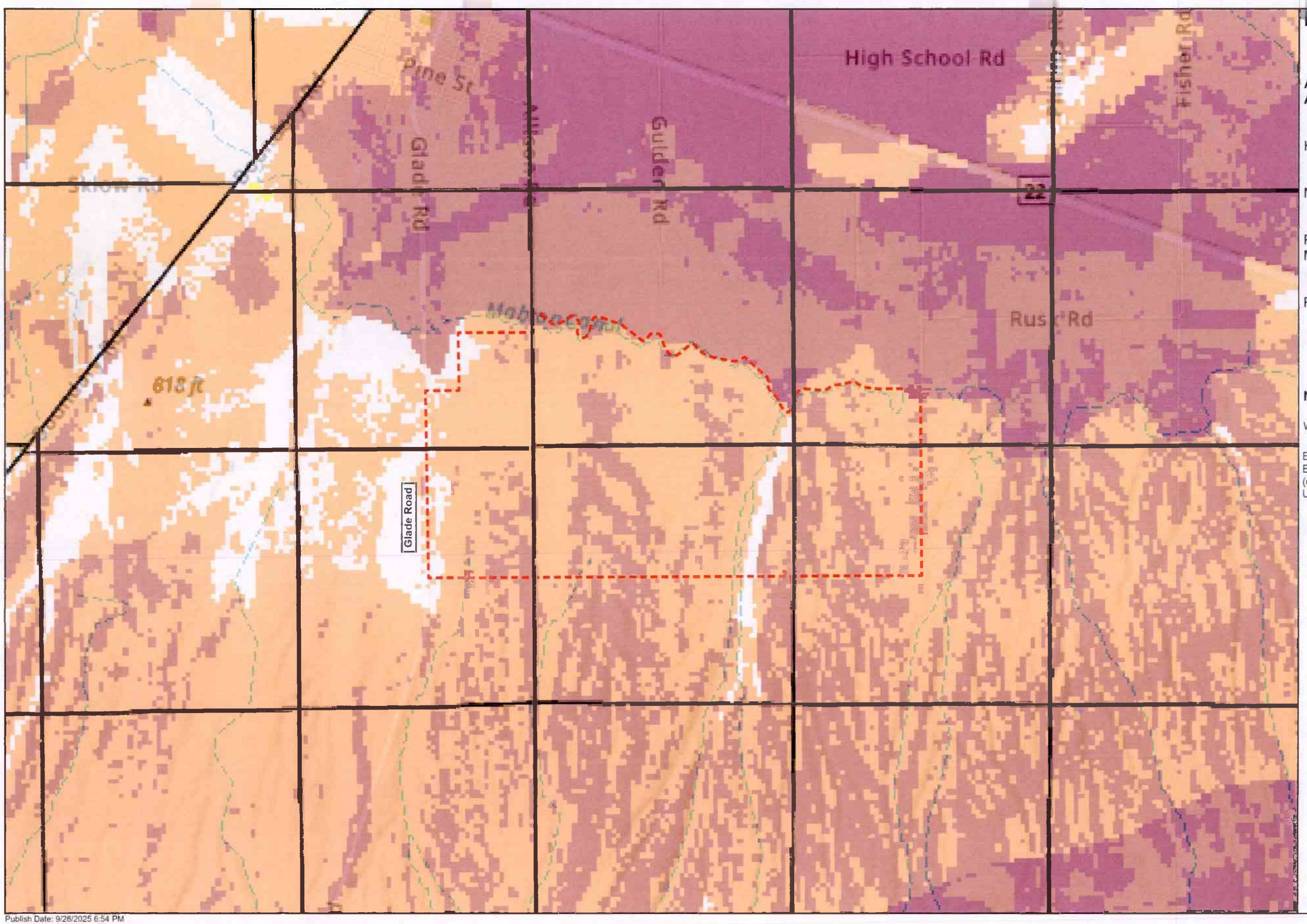
INLAND EARTH SCIENCES

**RIGHT-OF-WAYS AND EASEMENTS**

Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 8**




**LEGEND:**

SITE BOUNDARY

**ARCHAEOLOGICAL RISK ASSESSMENT**

SURVEY HIGHLY ADVISED: HIGH RISK

SURVEY RECOMMENDED: MODERATE RISK

SURVEY CONTINGENT UPON PROJECT PARAMETERS: MODERATELY LOW RISK

SURVEY CONTINGENT UPON PROJECT PARAMETERS: LOW RISK

**NOTE:**

Wissard.dahp.wa.gov/Map

Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

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INLAND EARTH SCIENCES

**POSSIBLE ARCHAEOLOGICAL RISK AREAS**

Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 9**


**LEGEND:**

SITE BOUNDARY

**PRIORITY HABITAT**

SHRUBSTEPPE HABITAT (PRESUMED)

**PRIORITY SPECIES**

TOWNSEND'S GROUND SQUIRREL

**NOTE:**

Washington DNR

Yakima County, Maxar

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INLAND EARTH SCIENCES

**PRIORITY HABITATS AND SPECIES**

Conditional Use Permit Application

Sagebrush Ranch

1423 Glade Road, Mabton, WA

**FIGURE 10**


**LEGEND:**

SITE BOUNDARY

**WILDLIFE HABITAT CONSERVATION AREA**

UPLAND HABITAT AREA

**NOTE:**

Yakima County, Maxar

N

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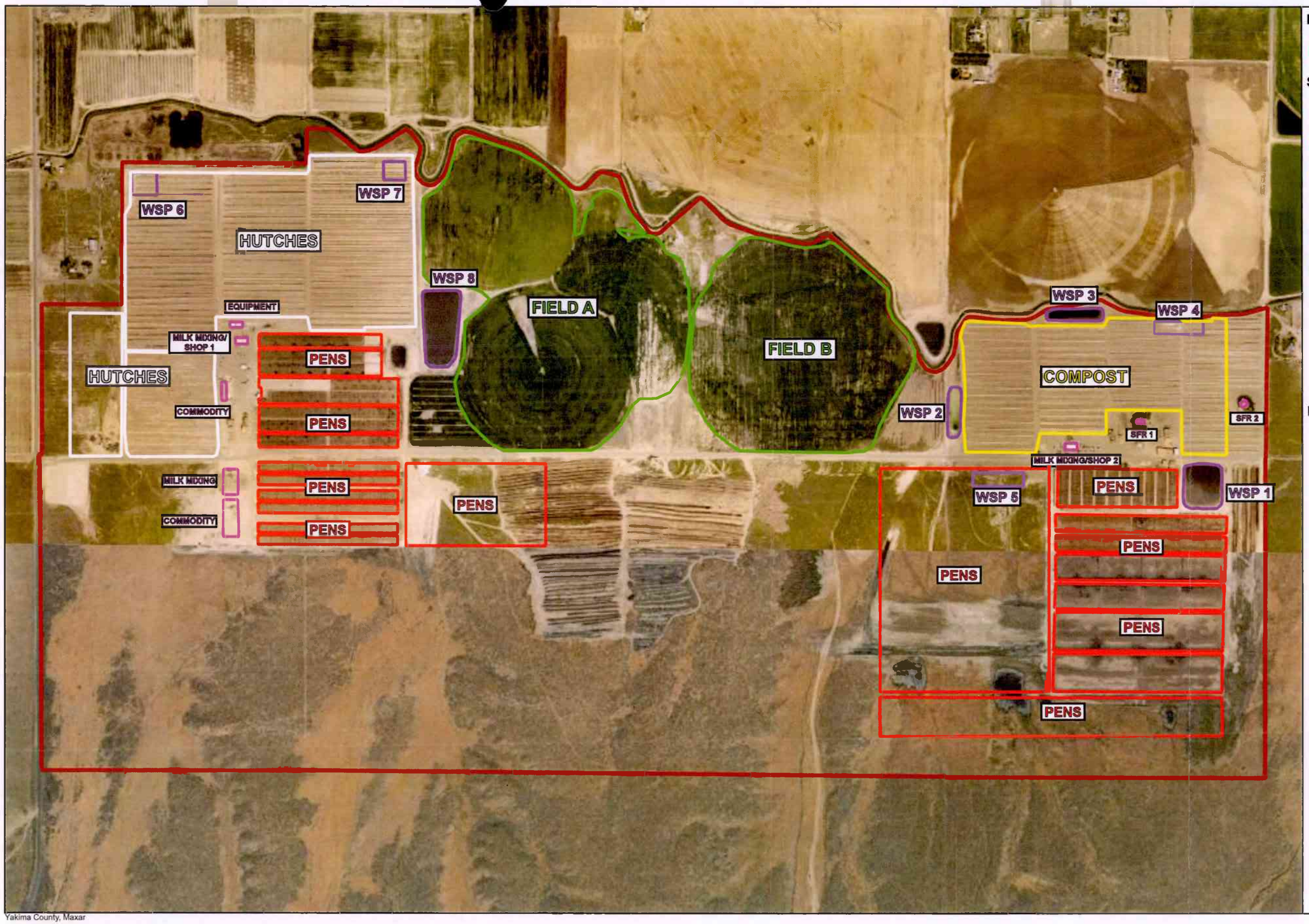
INLAND EARTH SCIENCES

**UPLAND WILDLIFE HABITAT CONSERVATION AREAS**

Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 11**




**LEGEND:**

- SITE BOUNDARY

**STRUCTURAL FEATURES**

- WASTE STORAGE PONDS
- ANIMAL PENS
- COMPOST PAD
- HUTCHES
- BUILDINGS
- FIELDS

**NOTE:**

Yakima County, Maxar

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Feet

Yakima County, Maxar

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INLAND EARTH SCIENCES

**PROPOSED EXPANSION LAYOUT**

Conditional Use Permit Application
Sagebrush Ranch
1423 Glade Road, Mabton, WA

**FIGURE 12**


**LEGEND:**

SITE BOUNDARY

**SITE FEATURES**

EXISTING WELLS

DRAINFIELDS

**NOTE:**

Yakima County, Maxar

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INLAND EARTH SCIENCES

**WELL LOCATIONS**
Conditional Use Permit Application
T. Freeman Dairy Expansion
6201 N Wahluke Road, Othello, WA

**FIGURE 13**